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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.
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09/196,680 11/20/98 MEYER

S 5903-157

000570 QM01/0328
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2005 MARKET STREET, SUITE 2200
PHILADELPHIA PA 19103

EXAMINER

KIM.C

ART UNIT

PAPER NUMBER

3752

DATE MAILED:

03/28/01

Please find below and/or attached an Office communication concerning this application or proceeding.

Commissioner of Patents and Trademarks

Office Action Summary

Application No.
09/196,680

Applicant(s)
Meyer et al.

Examiner
Christopher S. Klm

Group Art Unit
3752



☒ Responsive to communication(s) filed on 10 Jan 2001

☒ This action is FINAL.

☐ Since this application is in condition for allowance except for formal matters, **prosecution as to the merits is closed** in accordance with the practice under *Ex parte Quayle*, 35 C.D. 11; 453 O.G. 213.

A shortened statutory period for response to this action is set to expire 3 month(s), or thirty days, whichever is longer, from the mailing date of this communication. Failure to respond within the period for response will cause the application to become abandoned. (35 U.S.C. § 133). Extensions of time may be obtained under the provisions of 37 CFR 1.136(a).

Disposition of Claim

☒ Claim(s) 1-16 is/are pending in the applicat

Of the above, claim(s) _____ is/are withdrawn from consideration

☐ Claim(s) _____ is/are allowed.

☒ Claim(s) 1-16 is/are rejected.

☐ Claim(s) _____ is/are objected to.

☐ Claims _____ are subject to restriction or election requirement.

Application Papers

☐ See the attached Notice of Draftsperson's Patent Drawing Review, PTO-948.

☐ The drawing(s) filed on _____ is/are objected to by the Examiner.

☐ The proposed drawing correction, filed on _____ is ☐ approved ☐ disapproved.

☐ The specification is objected to by the Examiner.

☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. § 119

☐ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d).

☐ All ☐ Some* ☒ None of the CERTIFIED copies of the priority documents have been
☐ received.

☐ received in Application No. (Series Code/Serial Number) _____.

☐ received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

*Certified copies not received: _____

☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).

Attachment(s)

☐ Notice of References Cited, PTO-892

☐ Information Disclosure Statement(s), PTO-1449, Paper No(s). _____

☐ Interview Summary, PTO-413

☐ Notice of Draftsperson's Patent Drawing Review, PTO-948

☐ Notice of Informal Patent Application, PTO-152

— SEE OFFICE ACTION ON THE FOLLOWING PAGES —

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DETAILED ACTION

Response to Amendment

1. Amendment filed January 10, 2001 is acknowledged.

Claim Rejections - 35 USC § 103

2. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.
3. Claims 1-16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Fischer in view of Tramm.

With respect to claims 1-3, 7, 8, 9, and 13, Fischer discloses a sprinkler comprising: a generally tubular body 30 having a central passageway 31, a closure 40, a trigger 44, and a deflector 38. Fischer teaches the use of a deflector 38 shaped and positioned to transform a horizontal flow of water into a spray pattern of droplets dispersed over a generally horizontal, rectangularly-shaped coverage area (see figures 1 and 6). The coverage area may be up to 16 ft x 24 ft (see column 3 lines 55-58). Tramm discloses, in column 5, lines 12-14, a horizontal-type fire protection sprinkler having a K-factor of at least 3.5, or at least 5.0, or at least 7.0, or at least 10.5, or at least 13.0. It would have been obvious to a person of ordinary skill in the art at the time the invention was made to provide the sprinkler of Fischer with the range of K-factors taught by Tramm to provide a specific flow rate depending on pressure.

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With respect to claim 4, Fischer discloses the limitations of the claimed invention with the exception of the liquid filled glass bulb. Tramm discloses, pictorially, in figure 2, a liquid filled glass bulb 20. It would have been obvious to a person of ordinary skill in the art at the time the invention was made to replace the trigger of Fischer with the trigger (liquid filled glass bulb) of Tramm to eliminate the need for solder.

With respect to claims 5, 6, 10-12, and 14-16, Fischer discloses, in column 3, lines 55-58, a coverage area of 16 ft x 24 ft (using a deflector comprising a generally planar face portion and a canopy portion, see figure 2). It would have been obvious to a person of ordinary skill in the art at the time the invention was made that the coverage area is dependent on the fluid pressure, and therefore, any coverage area less than 16 ft x 24 ft can be attained by reducing the pressure (or increasing the K-factor which results in a lower pressure as defined by the formula in column 5, lines 30-38 of Tramm). It would have been obvious to a person of ordinary skill in the art at the time the invention was made to adjust the coverage area depending on the size of the room, since it has been held that where the general conditions of a claim are disclosed in the prior art, discovering the optimum or workable ranges involves only routine skill in the art. *In re Aller*, 105 USPQ 233.

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Response to Arguments

4. Applicant's arguments filed January 10, 2001 have been fully considered but they are not persuasive.

In response to applicant's argument that Tramm does not describe any sprinkler having a K-factor greater than 5.6, although Tramm discloses a nominal K-factor of 5.6 (column 5, line 40 and column 6, line 32), Tramm also teaches a formula for K-factor in column 5, lines 30-60 and K-factor ranges of at least 3.5, or at least 5.0, or at least 7.0, or at least 10.5, or at least 13.0 in column 5, lines 12-14. Tramm further teaches to apply the concept to horizontal-type sprinklers having smaller or larger values for K-factor than 5.6 (column 5, lines 42-43).

In response to applicant's argument that no manufacturer successfully fire tested or developed an orifice size larger than 17/32 inches and a K-factor greater than 8.0 for a sidewall sprinkler as supported by Mr. Golinveaux' Declaration, Mr. Golinveaux's belief is not considered a matter of fact which represents the global industry knowledge of sidewall sprinklers. In addition, the declaration does not appear to be germane to the matter of obviousness as taught by Fischer in view of Tramm.

In response to applicant's argument that it is not certain whether any UL or FM test requirements would be met for any distribution other than 16x24 feet, UL or FM test requirements do not appear to be claimed limitations.

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In response to applicant's argument that discovering the optimum range is not based on routine experimentation because of high cost, matter of obviousness is not determined by cost. In addition, the ability for a sprinkler to pass a standard does not determine patentability.

Conclusion

5. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

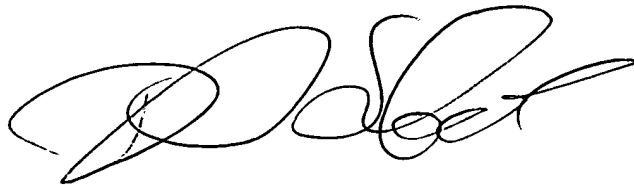
A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Christopher S. Kim whose telephone number is (703) 308-8336. The examiner can normally be reached on Monday-Thursday from 6:30 a.m. to 5:00 p.m.

The fax phone number for this Group is (703) 308-7766.

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Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Group receptionist whose telephone number is (703) 308-0861.

A handwritten signature in black ink, appearing to read 'D. Scherbel', with a stylized, cursive script.

CK

March 26, 2001

David A. Scherbel
Supervisory Patent Examiner
Group 3700